

whatsoever and exposing the solvent-free biological material to microwave radiation to free at least some of the natural product, and then separating any residual biological material from the extracted natural product. Additionally, the microwave extraction method involves the steps of applying reduced pressure in the enclosure during the microwave radiation stage and heating the enclosure during at least most of the microwave radiation stage to compensate for the temperature drop resulting from water evaporation from the biological material.--

IN THE CLAIMS

Please delete the title "CLAIMS" and insert therefore --What is claimed is--.

Please amend claims 1-13 as follows:

1. (Amended) A method for the microwave extraction of at least one natural product from a biological material, said method [consisting in] comprising:

[-] placing said biological material in an enclosure without any solvent[.];

[-] making said biological material present in said enclosure undergo microwave irradiation in order to prompt the evaporation of at least a part of the water contained in said biological material and, consequently, the splitting up of the cellular structures of said biological material so as to enable the release of at least a part of said natural product[.];

[- separating the residual biological material from the extracted natural product, said method being characterized in that it comprises the following complementary steps consisting in]:

[-] intermittently applying reduced pressure within said enclosure during said step for the application of microwaves in order to further the splitting up of the cellular structures of said biological material induced by the application of the microwaves[.];

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[-] heating said enclosure during at least the essential part of said step for the application of microwaves, in order to compensate for the drop in temperature resulting from the evaporation of water from the biological material, wherein making said biological material undergo microwave irradiation, intermittently applying reduced pressure, and heating said enclosure causes hydro-distillation of a natural product by conveying the natural product in water vapor coming from the biological material; and

[- the combination of said steps for the application of the microwaves, the application of reduced pressure within the enclosure and the heating of the enclosure permitting the hydro-distillation of said natural product by the conveying of this product in the water vapor coming from said biological material]

separating a residual biological material from the natural product.

2. (Amended) Method according to claim 1, [characterized in that said step consists in] wherein intermittently applying reduced pressure comprises subjecting [the] an interior of said enclosure to pressure-reduction cycles.

3. (Amended) Method according to [one of the claims 1 or 2] claim 1, [characterized in that] wherein said step for the separation of the residual biological material from the [extract] extracted natural product [consists in] comprises:

[-] refrigerating the water vapor containing said extracted natural product [,] ;

[-] decanting the liquid mixture resulting from such refrigeration [,] ; and

[-] separating said extracted natural product and the water resulting from such a decantation.

4. (Amended) Method according to claim 3, [characterized in that] wherein at least a part of said water resulting from decantation step is injected into the enclosure to carry out the hydro-distillation of the natural product remaining in said residue of biological material.

5. (Amended) Method according to [one of the claims 1 to 4] claim 1, [characterized in that] wherein said heating step is conducted at a temperature lower than 100°C.

6. (Amended) Method according to [one of the claims 1 to 5] claim 1, [characterized in that] wherein the microwaves used during said step of microwave irradiation have a frequency at least equal to 300 MHz.

7. (Amended) Method according to [one of the claims 1 to 6] claim 1, [characterized in that] wherein said step of microwave irradiation is conducted so as to apply power ranging from about 100 W to about 10,000 W per kilogram of processed product.

8. (Amended) Method according to [one of the claims 1 to 7] claim 1, [characterized in that] wherein said step of microwave irradiation is conducted under the mechanical stirring of said biological material.

9. (Amended) [Installation] Apparatus for the implementation of claim 1, [characterized in that it] the apparatus [comprises] comprising:

[-]an enclosure [(1)] provided with means to generate microwaves [(2)] within said enclosure [(1)] and having a thermostat-controlled double wall [(3)];

[-]heating means [(4)] enabling the temperature of said thermostat-controlled double wall [(3)] to be regulated;

[-]means [(5)] enabling the pressure inside said enclosure to be reduced; and

[-]means [(6)] to recover the extract when it comes out of said enclosure.

10. (Amended) [Installation] Apparatus according to claim 9, [characterized in that] wherein said means [(6)] for recovering the extract comprise refrigeration means [(7)].

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8 ~~11~~ (Amended) [Installation] Apparatus according to claim ~~9~~⁷ [or 10], [characterized in that it has means (8) to bring about the operation of] and further comprising means for cyclically operating said means [(5)] enabling the pressure within the enclosure to be reduced [cyclically].

~~12. (Amended) [Installation] Apparatus according to [one of the claims 9 to 11] claim 9, [characterized in that] wherein said enclosure is provided with stirring means [(9)].~~

~~13. (Amended) [Installation] Apparatus according to [one of the claims 9 to 12] claim 9, [characterized in that it comprises means (10) enabling the] and further comprising means for rerouting [of] the residual water obtained at said means for the recovery of the extract from within said enclosure [(1)].~~

Additionally, please insert new claims 14-17 as follows:

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14. A method for the solvent-free extraction of at least one extracted natural product from a biological material, the method comprising:

subjecting the biological material to microwave irradiation;
intermittently applying a vacuum to the biological material;
heating the biological material, wherein subjecting the biological material to microwave radiation, intermittently applying a vacuum to the biological material, and heating the biological material causes evaporation of at least a portion of water contained in the biological material and splits the cellular structure of the biological material and thereby releases a portion of the natural product; and

separating the released portion of the natural product from the biological material.--

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15. The method of claim ~~14~~¹¹, wherein separating the released portion from the biological material comprises:

cooling the released portion;
decanting a liquid mixture produced by cooling the released portion; and